O'HARE MODERNIZATION PROGRAM
AERONAUTICAL STUDY: 2003-AGL-0878-NRA
CITY RESPONSE TO FAA COMMENTS OF FEBRUARY 14, 2005

GENERAL COMMENTS

Ref. No.	Comment	Response
1.	**The Federal Aviation Administration continues to support the City of Chicago's Engineering and Construction Planning (E&CP) for O'Hare International Airport. Throughout the course of the FAA's Engineering Design Review (EDR) process, it is necessary to ensure that the plans reflect the intentions of the Airport Layout Plan (ALP) as proposed or reflect the changes requested by the FAA in response to the ALP review process.**	**The engineering and construction planning will include the intentions of the ALP as reflected in both the revised ALP Set and continued future FAA participation during EDR.**
2.	**The City of Chicago responded to FAA comments with either "Noted" or "Noted for Revision" numerous times throughout the document. For items that the FAA has commented on that require a modification to one or more ALP drawing sheets, the City of Chicago must modify the drawing per FAA comment.**	**Drawings will be modified and submitted with revised ALP Set.**

Ref. No.	Comment	Response
	JETBLAST	
3.	**Comment Number 5. The Sponsor notes that the Phase II Jet Blast Study is under development and should be available to the Federal Aviation Administration (FAA) in November, 2004. The FAA provided comments on the Phase I Jet Blast study in November. FAA continues to work with the City of Chicago on defining the most appropriate aircraft type to utilize in completing Phase II of this analysis. Further direction to the City will be provided in February.**	**Jet blast parameters of the A380 will be evaluated for the future NLA taxi routes while jet blast parameters of the B747-400 will be evaluated for all other taxi routes.**
11/15/04	*Comment Number 5. In accordance with FAA Airport Design AC 150/5300-13, Airport Design, paragraph 600. D. Jet Blast/Exhaust, NAVAIDs, monitoring devices and equipment shelters should be located at least 300' behind the source of jet blast to minimize the accumulation of exhaust deposits on antennas. See AC 150/5300-13, Chapter 8, The Effects and Treatment of Jet Blast. The City shall conduct the jet blast study workscope as identified in the June 9, 2004 letter from the Chicago Area Modernization Program Office to the City of Chicago.*	*Phase I of Jet Blast Study provided to FAA.* *Phase II in progress and to be submitted to the FAA by November month-end.*
4.	**Comment Number 6. Per the O'Hare Modernization Program – Phase I Jet Blast Study, Page 4, regarding Intersection of Taxiway M/Taxiway T, "Approximately 410 aircraft have the potential to create jet blast impact on the Navigational Aid (NAVAID)." This impact must be mitigated by the Sponsor.**	**See response to Reference Number 3. Also, the City and the FAA through the OMP/FAA NAVAIDS Working Group continue to develop mitigation of potential jet blast impacts on NAVAIDS.**
11/15/04	*Comment Number 6. The Runway 14R Localizer (LOC) antenna array will stand outside the runway and taxiway safety areas, but inside the Runway 10L/28R Object*	*Jet blast mitigation will be assessed during engineering/design phase. Information to be*

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	Free Area (OFA). The array may be in the path of jet blast from airplanes turning from the north parallel taxiway of Runway 10L onto the north parallel taxiway of Runway 32L. The array would be expected to receive repeated 70-mph breakaway thrust jet blasts from B-747's during the facility life. Consideration should be given to mitigate these blast effects.	*provided to the FAA through the NAVAID Working Group. Also, see response to Comment 5*
	ACCESS ROADWAYS	
5.	**Comment Number 7. The City of Chicago needs to work with the FAA to appropriately determine the locations of the permanent service roads. The timing of development of the permanent service roads can be reflected in the phasing drawings to be provided to the FAA.**	**The City and FAA through the NAVIADS Working Group continue to refine NAVAID locations and associated access service roads. Service roads will be reflected in the phasing drawings and will be provided separate from the revised ALP Set.**
6.	**Comment Number 10. The FAA is prepared to address any remaining questions and provide any required information so that the City of Chicago can provide Phasing Drawings as identified in the June 9, 2004 letter from the Chicago Area Modernization Program Office.**	**Details of the phasing drawings will be provided as set forth in the Phasing Drawings Workscope; Appendix A of the FAA Comments of July 22, 2004. Phase IA, Phase I Completion and Phase II Completion phasing drawings will be included in the revised ALP Set. The remaining phasing drawings will be provided to the FAA separate from the revised ALP Set and outside of the ALP approval process.**

Ref. No.	Comment	Response
	AIRCRAFT RESCUE & FIRE FIGHTING (ARFF)	
7.	**Comment Number 11. In conducting the Aircraft Rescue & Fire Fighting (ARFF) workscope, the FAA performed a series of field tests. In four test runs, the first response ARFF times were in excess of the 14 CFR Part 139 requirements three of four times with the remaining test run meeting the requirement. Please refer to the ARFF testing assumptions and results document prepared by the FAA dated October 29, 2004. If the proposed new north Runway is commissioned, the City of Chicago must demonstrate ARFF response times to the mid-point of the runway from its assigned station in conjunction with the requirements as set forth in 14 CFR Part 139.319, Aircraft Rescue and Fire Fighting: Operational requirements. The City of Chicago should address how they intend to sufficiently demonstrate the required response time is achievable.**	**Airfield infrastructure, operational procedures and contingencies will be developed to ensure the required response time to the mid-point of the runway is met as set forth in 14 CFR Part 139.319.**
	NAVAIDS/FAA FACILITIES	
8.	**Comment Numbers 12 through 19, Comment Number 21 and Comment Numbers 23 through 28. The FAA has determined it is acceptable that the type and phasing of NAVAIDS will be determined through the engineering/design phase and information can be provided to the FAA through the NAVAIDs working group. However, the general location of the NAVAIDs should be modified on the ALP where stipulated in FAA comments.**	**New FAA facilities are to be built and installed prior to decommissioning of old facilities to ensure no disruption of service requirements. Coordination and communication of impending changes to NAVAIDS and FAA facilities are currently provided on a regular basis and any modifications of the ALP will be coordinated with FAA. Although changes may be recommended by the Working**

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		Group after submittal of a revised ALP set, locations of NAVAIDS on the ALP will be provided based on the most current information.
11/15/04	*Comment Number 12. The proposed ALP, Aeronautical Study number 2003-AGL-0878-NRA, identifies the best location for FAA NAVAIDs, given the information currently available. It is required that prior to construction, all FAA National Airspace System (NAS) facilities will undergo extensive siting evaluation by the FAA and the sponsor. The FAA and the sponsor will use more specific and timely information to determine the optimal location, in accordance with applicable FAA orders, AC's and siting criteria. Specifically, the placement of the Very High Frequency (VHF) Omni-directional Range (VOR), Airport Surveillance Radar (ASR), ATCTs, components of the Instrument Landing System (ILS) as well as surveillance, communication and weather system facilities, etc. will require additional engineering to determine their optimal placement. In addition, each construction activity shall be preceded by a Construction Safety Phasing Plan (CSSP) aeronautical study.*	***Type, location and phasing of NAVAIDS will be determined through the engineering/ design phase and information provided to the FAA through the NAVAIDS Working Group.***
11/15/04	*Comment Number 13. To accommodate the modifications proposed under the ALP, extensive duct work, infrastructure and fiber optics cable modifications are needed. Proactive, aggressive planning by the sponsor will be necessary to accommodate or support the infrastructure requirements within the periods and phases identified.*	*See response to Comment 12.*
11/15/04	*Comment Number 14. The VOR with Distance Measuring Equipment (DME) critical area has a radius of 1000'. The proposed ALP identifies the existing and future location of the VOR/DME, as well as its critical area. The VOR 1000' critical area is equivalent to a Building Restriction Line (BRL). Any proposed construction, grade change, massing of vehicles or aircraft within 1000' of any VOR shall be evaluated by the FAA in order to protect the integrity of the VOR operation. The area within the*	*See response to Comment 12.*

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	critical area must not be modified without prior approval from the FAA.	
11/15/04	*Comment Number 15. The ASR critical area has a radius of 1500'. The proposed ALP identifies the existing and future locations of the ASRs, as well as the critical areas. The ASR critical area should not be equated to a BRL. Proposed constructions within an ASR critical area must be evaluated, and if possible, approved on a case-by-case basis. Any proposed construction, grade change or structure proposed within 1500' of any ASR shall be evaluated by the FAA to protect the integrity of the ASR operation. The area within the critical area must not be modified without prior approval from the FAA.*	*See response to Comment 12.*
11/15/04	*Comment Number 16. In response to the ALP proposed under earlier Airspace Study number 2002-AGL-0848-NRA, the FAA requested that the critical area for the National Weather Service (NWS) owned Automated Surface Observation System (ASOS) and its 500' critical area be depicted. The current proposal, 2003-AGL-0878-NRA, identifies the future location of the ASOS co-located with the Runway 27L GS. With this configuration, the ASOS 500' critical area depiction is not necessary, however it should be understood that a 500' critical area exists around the proposed ASOS. This particular critical area should not be equated to a BRL. Construction should be evaluated, and if possible, approved on a case-by-case basis. Any proposed construction, grade change or structure proposed within 500' of the proposed ASOS should be evaluated to protect the integrity of the ASOS operation. The area within the critical area must not be modified without prior approval from the FAA and the NWS.*	*See response to Comment 12.*

Ref. No.	Comment	Response
11/15/04	*Comment Number 17. Underground diesel fuel storage tanks will be required at some locations. It is assumed that each of the LOC/ALSF-2 buildings will contain a diesel Engine Generator (EG). Each EG requires a minimum of a 1,000-gallon diesel fuel tank. Because the LOC buildings must be within the Runway Protection Zone (RPZ), the tanks must be placed underground. The underground tanks must meet all the applicable local, state, and federal environmental requirements.*	*See response to Comment 12.*
11/15/04	*Comment Number 18. The Precision Approach Path Indicator (PAPI) facilities are, by design, located close to runways and taxiways. It will be necessary to design the area in such a way to promote operability, serviceability and accessibility to the PAPI facilities. To facilitate protection of the PAPIs from grass cutting equipment, it will be necessary to place the PAPIs on an asphalt (or equivalent) pad that will provide a buffer from grass cutting equipment. In addition, service road access to the PAPIs from the connector taxiways will be essential. During snow operations, a plan must be developed by the City of Chicago to protect the PAPIs from the discharge of snow removal equipment. The piling and banking of snow cannot be placed in such a way as to interfere with the line of sight for the PAPIs.*	*See response to Comment 12.*
11/15/04	*Comment Number 19. The PAPI pad, access road width and location in relation to the connector taxiways should be evaluated together by the FAA and the sponsor. The pad may be substantially wider and longer than the access road width in order to permit snow removal equipment to circumnavigate the visual aid. This could create the impression of a continued taxiway, potentially creating a hazard. Access roads should not commence at a taxiway across from another taxiway, possibly creating the impression of a continuation of that taxiway. Each PAPI "Snow Pad" should be reviewed by the FAA, to ensure that all concerns area addressed.*	*See response to Comment 12.*

Ref. No.	Comment	Response
9.	**Comment Number 20. In the Sponsor's comment back to the FAA, the Sponsor indicated that this comment will be managed through the NAVAIDs Working Group. This does not adequately resolve comment number 20. There may be a misunderstanding of the intent of the original comment. The FAA is requesting that the Sponsor communicate the reflector information to construction firms on an as needed basis. The Airport Surface Detection Equipment (ASDE) reflectors do not look like National Airspace System (NAS) equipment, they look like fence posts that are falling over. If construction occurs near these reflectors, the Sponsor should educate those doing the construction on what these are and how to protect them.**	**Descriptions, drawings, diagrams, etc., of FAA NAVAIDs and FAA facilities including existing and future locations of NAVAIDS should be provided to the City by the FAA through the OMP/FAA NAVAIDS Working Group. In turn, the City will provide this information to the design team, engineers, contractors and construction crews to ensure that FAA equipment is protected during construction.**
11/15/04	*Comment Number 20. Numerous existing NAS facilities on the airfield are required for the operation of the ASR-9 and Airport Surface Detection Equipment, Type Three (ASDE-3). These facilities are called Moving Target Indicator (MTI) reflectors and Fixed Target Reflectors (FTRs). While the FAA does not require that these FAA NAS facilities appear on the ALP, the FAA is providing the most up to date coordinates for the facilities. Locations for the MTI and FTR reflectors are included in* ***Appendix B****. This information should be conveyed to the civil engineers and construction firms so they can understand what these facilities are and protect them.*	*See response to Comment 12.*

Ref. No.	Comment	Response
11/15/04	*Comment Number 21. The Sponsor must assume their portion of the responsibility for ensuring continuous operation of critical weather, communication, radar and navigational aid devices. All equipment required to support seamless, safe and efficient airport operation shall be protected from construction or airport modification until suitable replacement systems or operational plans are in place.*	*See response to Comment 12.*
11/15/04	*Comment Number 23. In accordance with AC 150/5300.7b, FAA Policy on Facility Relocations Occasioned by Airport Improvements or Changes, Paragraph 5, Accomplishment of Work, the FAA shall have exclusive right to determine how all facets of the relocation of an FAA facility will be accomplished. This includes, but is not limited to, engineering, site selection, procurement of equipment, construction, installation, testing, flight inspection and re-commissioning of the facility.*	*See response to Comment 12.*
11/15/04	*Comment Number 24. The RVR Facilities identified on the proposed ALP meet the standard siting criteria. The RVR siting criteria in AC 150/5300-13 is being updated. When the engineering for the project progresses to a point where RVR siting is necessary, coordination with the FAA must be initiated by the Sponsor's engineering staff.*	*See response to Comment 12.*
	COMMUNICATIONS	
10.	**Comment Number 25. The Sponsor responded to this comment by repeating comment number 12. This does not adequately resolve comment number 25. The FAA's comment number 25 is highlighting a concern that the proposed North Airport Maintenance Complex (AMC)**	**The location of the AMC building will be determined during the engineering and design phase. The ultimate location or modification of the structure of the**

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	building is proposed at a location that could significantly impact the operation of RTR-P, and as such, would receive a Determination of Presumed Hazard (DPH), until the impact is mitigated. The Sponsor should be aware that the AMC building will require aeronautical study and possibly impact mitigation prior to approval.	**building will be finalized after the FAA has completed required airspace studies and only after findings of such studies are satisfied.**
11/15/04	*Comment Number 25. The proposed North Airport Maintenance Complex (AMC) building located near the Fuel Tank Farm may affect the Remote Transmit/Receive (RTR) -P facility. The antennas for the RTR must have a clear line of site to the approach threshold of Runway 9L. A final determination cannot be made until the design of the AMC building is known. As soon as the height, footprint and material of the AMC building is known, the sponsor should begin airspace approval coordination with the FAA through a request for an aeronautical study.*	*See response to Comment 12.*
11/15/04	*Comment Number 26. In order to support the expanded communications requirements that result from the proposed ALP, it may become necessary to add RTR facilities to the overall FAA communications plan. If additional RTR facilities become necessary, it will be the sponsor's responsibility to provide a suitable location, as well as funding necessary to establish the facilities.*	*See response to Comment 12.*
11/15/04	*Comment Number 27. The intent is for existing O'Hare Fiber Optics Transmission System (FOTS) cable loops to remain intact throughout construction. Due to construction activities, some existing fiber cable segments will have to be rerouted because the existing service will be destroyed. Prior to construction activities that will destroy an existing fiber cable segment, and in lieu of splicing working segments after cutting, a new fiber cable will be installed between fiber patch panels and a transition to the new cable must occur. The cost of this must be borne by the Sponsor.*	*See response to Comment 12.*

Ref. No.	Comment	Response
11/15/04	*Comment Number 28. During Phases 1A and 1B, construction on the new fiber duct system and new FOTS loops may begin. Instead of creating linear point-to-point FOTS configurations (i.e., establishing a two terminal system) a third hub node may have to be established at the O'Hare International Airport (ORD) ATCT until RTR locations have been established. It is possible that when ready, the hub nodes will be relocated to the new RTR building, and connected back on the loop (will permit the node to be programmed at installation as if it were already at the new RTR location). If instead, linear point-to-point configurations were established, an entire fiber loop would have to be turned down, deprogrammed, and re-established as a multi-node ring configuration (this will take days to reconfigure). This requires the simultaneous purchase of all FOTS equipment necessary to establish each complete ring. Therefore, a FOTS plan will be needed to minimize the risk associated with conducting construction activities on an operational airport. It will be imperative that the sponsor coordinate each phase with the FAA prior to beginning construction*	*See response to Comment 12.*
11.	**Comment Number 29. The FAA frequency analysis continues.**	**Awaiting results of analysis from FAA. Sponsor understands this is an ongoing implementation planning issue and not part of the ALP process.**
11/15/04	*Comment Number 29. The O'Hare Modernization Program (OMP), as proposed, requires additional communication channels (frequencies). The additional air/ground communication channels must be found within the present FAA air/ground spectrum. The FAA is conducting a spectrum analysis to determine the scope of the spectrum requirements. Once this is completed, the sponsor may be asked to participate in an effort to obtain the necessary frequencies.*	*FAA to provide requirements to sponsor*

Ref. No.	Comment	Response
	TRANSPORTATION SECURITY ADMINISTRATION	
12.	**Comment Numbers 31 to 34. The City of Chicago must consult the TSA for any design of new facilities or modifications of existing facilities that may affect security. Comments provided to the City of Chicago in the July 22, 2004 FAA document remain valid and must be complied with as planning progresses.**	**Comments provided by the City in July 22, 2004 remain valid.**
11/15/04	*Comment Number 31. Construction and other projects impacting the security of ORD will necessitate either a notification of changed conditions affecting security, or an amendment to the ORD airport security program depending on the duration of the particular project.*	*TSA, where appropriate, will be consulted for any design of new facilities or modification of existing facilities that may affect security.*
11/15/04	*Comment Number 32. In the event that the Sponsor has established any Exclusive Area Agreements that will be impacted by any projects related to the OMP, the Sponsor will need to ensure procedures are in place for the relevant aircraft operator or foreign air carrier to provide for alternate security measures if necessary.*	*See response to Comment 31.*
11/15/04	*Comment Number 33. In the event that the Sponsor has established any Airport Tenant Security Programs that will be impacted by any projects related to the OMP, the Sponsor will need to ensure procedures are in place for the relevant tenant to provide for alternate security measures if necessary.*	*See response to Comment 31.*
11/15/04	*Comment Number 34. The fingerprint-based Criminal History Record Check requirements outlined in 49 Code of Federal Regulations (CFR) 1542.209 must be met by all persons employed to work in an unescorted capacity within the Secured Area and/or Airport Operations Area (AOA) during all phases of projects related to the OMP.*	*See response to Comment 31.*

Ref. No.	Comment	Response
	INDIVIDUAL SHEET COMMENTS	
	General note: *Comments below apply specifically to the sheet where noted. However, global changes should be made to address the same comment on all sheets within the ALP set depicting the same information.*	
	COVER SHEET	
13.	**The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Modifications of ALP will be provided in the revised ALP Set.**
11/15/04	*The October 2003 ALP submittal is assigned an airspace case of "2003-AGL-0878-NRA" not "2003-AGL-0848-NRA". The next ALP re-submittal will be assigned a new airspace number upon its arrival.*	*Noted for revision*
	SHEET #1: CONTENT SHEET	
14.	**The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Modifications of ALP will be provided in the revised ALP Set.**
11/15/04	*Ensure page title on content sheet matches the actual sheet title.*	*Noted for revision*

Ref. No.	Comment	Response
	SHEET #2: EXISTING AIRPORT LAYOUT PLAN	
15.	**The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Modifications of ALP will be provided in the revised ALP Set.**
11/15/04	*The "banana" portion of Concourse B is incorrectly labeled "Concourse A". Please revise.*	*Noted for revision*
	SHEET #3: FUTURE AIRPORT LAYOUT PLAN	
16.	**Comment Number 47. FAA recommends the City of Chicago explore the possibility of converting the south turnoff from Runway 27C located west of Runway 22R (approximately 5,200' from the Runway 27C threshold) to a high speed exit during the engineering/design phase.**	**This high-speed exit will be evaluated during Future Runway 9C-27C engineering/ design phase.**
11/15/04	*Comment Number 47. For operational flexibility, the south turnoff from Runway 27C located west of Runway 22R (approximately 5,200' from the Runway 27C threshold) should be modified to a high-speed exit, if able.*	*Noted for evaluation during the engineering/ design phase.*
17.	**Comment Number 49. Although the City indicates that the simulation modeling does not support retaining the hold pad on the north side of Future Runway 9R, the FAA recommends retaining this hold pad to provide operational flexibility during either abnormal operating conditions at O'Hare or during abnormal operating conditions at other destination airports.**	**Future planning efforts will consider this.**

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11/15/04	*Comment Number 49. A hold pad on the north side of Future Runway 9R is recommended to provide operational flexibility. Preferred siting of this hold pad is between the third and fourth proposed north/south access taxiways.*	*Current simulation analysis does not support operational requirements of a hold pad. Future planning efforts may consider it.*
18.	**Comment Number 50. The FAA has determined that it is acceptable to evaluate the obstructions to be removed as a result of the elevation of the Runway 27R approach light plane during the engineering/design phase.**	**Obstructions will be evaluated during Runway 27R approach plane engineering/ design phase.**
11/15/04	*Comment Number 50. The elevation of the Runway 27R approach light plane will govern obstruction removal where it is below the 50:1 approach surface. There are two options in designing the approach light plane; both governed by the elevation of the Runway 22R 50:1 approach surface (see Sheet 15). The Runway 27R ALSF-2 light bars cannot be permitted to penetrate the Runway 22R 50:1. The Sponsor must resolve this conflict. Two of the options are:* *a. Option 1. Design the ALSF-2 such that the approach light plane is coplanar with the 50:1 approach surface out to the station 10+25 light bar. At the 10+25 bar, the steady-burning lights will be at elevation 677.0. Break the approach light plane at station 10+25, and run it out at elevation 677.0 to the end of the system.* *b. Option 2. Design the ALSF-2 with a constant slope of 1.74 percent out to an elevation of 681.5 at station 14+05. The station 14+05 steady-burning light centerlines will be 0.1' lower than the Runway 22R 50:1 approach surface at that point. Break the 27R approach light plane at station 14+05, and run it out at elevation 681.5 to the end of the system.*	*Noted for evaluation during the engineering/ design phase.*

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	The sponsor should study the obstructions that would have to be removed or lowered in each option to determine which of the two options involves less costly obstruction removal. Of particular interest are the above-mentioned streetlights and a streetlight or two along the east edge of Lee Street. Option 1 would give a lower approach light plane, and less expensive towers. *Confirm the removal of all the trees along the East side of Lee Street; out to 210 feet both sides of the Runway 27R extended centerline. This will preclude future problems with ALSF-2 construction and tree re-growth. The ALSF-2 approach light plane design option selected will govern obstruction removal within the boundaries of the approach light plane. Outside the approach light plane, the 50:1 approach surface will govern obstruction removal.*	
19.	**Comment Number 53. Please update the FAA on the City of Chicago's status concerning the detailed assessment of the buildings depicted in the proposed Runway 10L Runway Protection Zone. As already mentioned by the FAA, the light bar siting would present structural, access, safety, and leasing challenges.**	**Design of the runway extension and associated navigational aids continues. This design work is being coordinated and reviewed with the FAA in appropriate forums. This coordination and review is expected to continue outside of the ALP planning process. Detailed assessment of buildings will be conducted and a status of findings to be provided to the FAA during the week of May 9.**
11/15/04	*Comment Number 53. The FAA requests that the City of Chicago clarify if any buildings depicted on the base mapping in the Runway 10L RPZ are places of public assembly. If the building just west of York Road remains, it appears that two of the Runway 10L ALSF-2 light bars would have to be mounted on the building. This light bar siting would present structural, access, safety, and leasing challenges.*	*Preliminary survey indicates that these buildings are not places of public assembly however, a detailed assessment will be provided during discussions with property owners regarding easements for the approach lighting system (ALS). Technical issues pertaining to the ALS will be*

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		determined during the engineering/ design phase and communicated to the FAA through the NAVAID Working Group.
20.	**Comment Number 56. The FAA has recommended that the location of the Runway 28L touchdown Runway Visual Range (RVR) be changed to 1,050 feet west of the threshold and 370 feet south of the runway centerline. The Sponsor should include this change in the next Airport Layout Plan (ALP) revision. If for some reason the Sponsor does not concur with this comment, please discuss this with the FAA.**	**To be relocated on revised ALP Set.**
11/15/04	*Comment Number 56. As presently sited, the Runway 28L touchdown RVR may not give representative visibility readings. Show the Runway 28L touchdown RVR 1,050 feet west of threshold and 370 feet south of runway centerline.*	*Noted for evaluation during engineering/ design phase.*
21.	**Comment Number 57. The FAA has recommended that the Localizer/Approach Lighting System with Sequence Flasher, Type 2 (ALSF-2) building be moved to at least 250 feet north of the Runway 28C extended centerline. The Sponsor should include this change in the next ALP revision. If for some reason the Sponsor does not concur with this comment, please discuss this with the FAA.**	**To be relocated on revised ALP Set.**
11/15/04	***Comment Number 57.*** *Future Runway 28C Approach: Move the LOC/Approach Landing System (ALS)/DME building to be more than 250 feet north of Runway 28C extended centerline. It will be near the Runway 22L GS.*	*Noted for evaluation and revision during engineering/ design phase.*

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22.	**Comment Numbers 58 and 59. Ultimately the FAA recommends removal of all abandoned pavement. The City of Chicago needs to work with the FAA to clearly identify pavement that is going to be removed as the project progresses. In addition, the City of Chicago must submit a pavement removal program that includes a timeline for pavement removal and a proposed methodology of marking pavement as unusable.**	**The City will work with the FAA to develop a Pavement Removal Program that is safe, efficient and cost-effective.** **The Ultimate phasing drawing as submitted to the FAA only illustrates usable pavement and is not intended to imply that all portions of unusable pavement will be removed. However, a Pavement Removal Program may include pavement removal and/or painting, marking, covering or otherwise rendering certain portions of pavement unusable for aircraft and clearly marked as such.**
11/15/04	*Comment Number 58. Pavement removal hatching should be depicted in the Future Runway 28R/22L pad islands, south of "D6" (they are currently hatched as existing pavement to remain). The Phase 1 Concept and Ultimate Phase Concept plans show that this pavement will be removed.*	*The Future ALP depicts abandoned pavement while the Ultimate Phase Plan only depicts usable pavement and does not imply abandoned pavement will be removed. For clarity, the Future ALP legend will be modified.*
11/15/04	*Comment Number 59. Depict all abandoned pavement as removed*	*While it is anticipated that the City will establish a pavement removal program, it is not anticipated that all pavement will be removed immediately upon decommissioning.*
23.	**Comment Numbers 63, 64, and 65. The Proposed North Airport Traffic Control Tower (ATCT) will not correct Line of Sight (LOS) impacts to movement areas that are projected to be under the control of the existing operational tower. A Line of Sight study should be accomplished from the existing ATCT to the proposed pavement beyond the existing Heating &**	**Line of Sight impacts to the existing ATCT will be evaluated as new facilities are implemented. Initial development phases do not include facilities that would impact the Line of Sight and not be mitigated by the North Airport Traffic**

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	Refrigeration (H&R) building (Number 450). The study should also include the proposed Terminal 4 structures impact on the proposed pavement. In addition, the proposed future-cooling towers (Number R22) should be evaluated to determine if they, or plumage from them, would have any effect on the line of sight. Finally, plumage from the proposed Exhaust Room #1 and Exhaust Room #2 (Numbers 437 and 438) could also impact the line of sight from the existing ATCT. These buildings are not mentioned nor resolved in the "North Airport Traffic Control Tower Site Select Study." The City must address the siting and any potential issues associated with the plumage.	**Control Tower. The City will evaluate the potential impacts of the plumage prior to implementation planning of these exhaust facilities.**
11/15/04	*Comment Number 63. The proposed Terminal 4 (Labeled "T2") and existing (Heating & Refrigeration) H&R Building, number 450, should be evaluated to determine if the proposed building would affect the line of sight from the existing ATCT to the airport movement area*	*It has been determined that supplemental LOS coverage provided by the North ATCT would mitigate any LOS obstructions that could exist from the existing ATCT. See Final "North Airport Traffic Control Tower Site Selection Study" – September 12, 2003.*
11/15/04	*Comment Number 64. Proposed building R22, future-cooling towers should be evaluated to determine if it, or plumage from it, would have any effect on the line of sight from the existing and future ATCT to airport movement areas.*	*See response to Comment 63.*
11/15/04	*Comment Number 65. Building numbers 437 and 438 are identified on the key as exhaust room #1 and exhaust room #2. Prior to construction, these proposed buildings as well as the predicted plumage should be evaluated to determine if it would have any effect on the line of site from the existing ATCT to airport movement areas.*	*See response to Comment 63.*

Ref. No.	Comment	Response
24.	**Comment Numbers 70, 71 and 72. These planned non-standard conditions will require a modification to standards.**	**A list of Modifications to Standards (MOS) will be submitted under a separate cover in accordance with FAA Order 5300.1F "Modifications to Agency Airport Design, Construction, and Equipment Standards."**
11/15/04	*Comment Number 70. The runway/parallel taxiway separation for the future Runway 9R/27L (Existing Runway 9L/27R) with an extension can be shown as depicted on the ALP drawing. Due to the presence of a second parallel taxiway, aircraft can be routed on this taxiway during CAT II/III conditions. Please see the April 8, 2004 letter from the Chicago Area Modernization Program Office to the City of Chicago.* ***(See Appendix C)***	*No ALP change; operational restriction required*
11/15/04	*Comment Number 71. Reference runway to parallel taxiway separation standards; follow the guidance in the FAA letter on this subject dated April 8, 2004, from the Chicago Area Modernization Program Office to the City of Chicago.* ***(See Appendix C)***	*No ALP change; operational restriction required*
11/15/04	*Comment Number 72. Taxiway to runway centerline distance restrictions per United States Standard for Terminal Instrument Procedures (TERPS) Instruction Letter (TIL) 00-005A (effects of Height Above Touchdown (HAT) values) are as follows:* *a. The minimum HAT value for CAT II operations is 100 feet where the runway centerline to taxiway centerline separation is 600 feet or greater. This value may be also achieved with:* *1. Runway taxiway centerline separation of 500 feet at elevations of 4,000 feet and below, provided taxi operation are restricted to aircraft with wingspans less than 214 feet and tail heights less than 66 feet.*	*No ALP change; operational restrictions noted*

Ref. No.	Comment	Response
	2. *Runway taxiway centerline separation of 400 feet at elevations of 4,000 feet and below, provided taxi operation are restricted to aircraft with wingspans less than 171 feet and tail heights less than 55 feet.* 3. *Larger aircraft flying the approach or taxiing on parallel taxiways, or taxiway/runway separation less than stated above require a collision risk analysis to determine the minimum HAT values.*	
25.	**Comment Number 78. The FAA recommends that the City tunnel the service road north of Taxiway M between Taxiway ZT and Taxiway ZV through north of Taxiway LL between Taxiway ZZ and Taxiway S. This recommendation is based on the identification of heavy volumes of vehicular and aircraft traffic expected in this area. Construction of the proposed tunnel addresses concerns about the potential of surface incidents and reduces the probably of significant surface delays during periods of high aircraft activity.**	**TAAM modeling results show that with the introduction of new runways and taxiways on the south airfield, while vehicular traffic increases, aircraft taxi operations crossing service roads at existing Taxiways M5, M6 and D and future Taxiways LL and ZY are expected to decrease by 2.6% by completion of OMP PHASE I compared to baseline 2002 and decrease by 7.9% five years after the completion of OMP PHASE II. While the City will continue to study the feasibility of this tunnel, it does not appear to be warranted at this time.**
11/15/04	*Comment Number 78. The runway/parallel taxiway separation for future proposed Runway 10L/28R (Existing Runway 9R/27L) with extension can be shown as depicted on the ALP drawing. Due to the presence of a second parallel taxiway, aircraft can be routed on this taxiway during CAT II/III conditions. However, due to the heavy volume of traffic, both aircraft and service vehicles, the FAA recommends that the City tunnel the service road north*	*New roadways have been tunneled/depressed under aircraft movement areas where practical. The roadways in question have been planned per FAA standard and tunneling has not been*

Ref. No.	Comment	Response
	of Taxiway M between Taxiway ZT and Taxiway ZV through north of Taxiway LL between Taxiway ZZ and Taxiway S. A north/south service road should be maintained at the exit of the east side of the tunnel.	*determined as a requirement.*
	SHEET #4: AIRPORT DATA SHEET	
26.	**The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Airport Data Sheet #4 to be modified and submitted with revised ALP Set.**
	SHEET #8: FUTURE TERMINAL AREA PLAN - EAST	
27.	**Comment Number 84. It should be noted that GP9 no longer exists.**	**No revision necessary.**
11/15/04	*Comment Number 84. Guard Post point 9, (GP9) or the ATCT height information should be moved slightly so that the ATCT top elevation is visible. The ATCT height elevation is needed for planning purposes.*	*Noted for revision*
	SHEET #10:PHASE 1A CONCEPT PLAN	

Ref. No.	Comment	Response
28.	**Comment Number 89. The FAA's recommended change should appear in the revised ALP. The revised plan should show the proposed Runway 14L ALSF-2 building centered lengthwise 580 feet northeast of the Runway 14L centerline, with its southeast end 1,265 feet southeast of the Runway 14L pavement end.**	**Runway 14L ALSF Building to be relocated as recommended by FAA to be included with the revised ALP Set.**
11/15/04	*Comment Number 89. The 24' x 68' Runway 14L ALSF-2 building is not shown. Show it 1,000 feet northwest of the Runway 14L displaced threshold with its length perpendicular to Runway 14L. Place the southwest wall of the building 410 feet northeast of Runway 14L centerline.*	*Recommendation noted. See response to Comment 12.*
29.	**Comment Number 90. The FAA's recommended change should appear on the revised ALP. The revised plan should show the proposed perimeter road modified to avoid crossing through the Runway 32R Localizer Critical Area where possible.**	**The revised ALP Set will be modified to show a change to the location of the proposed perimeter service road where possible.**
11/15/04	*Comment Number 90. The Runway 32R LOC antenna array is correctly shown centered approximately 1,094 feet from the northwest end of Runway 14L pavement. It shall be permitted to leave the array at its present location if the new perimeter road north of it is relocated. The plan should be modified to show the straight segment of the perimeter road northeast of the array extended 150 feet to the west before it curves southerly. Do not curve the road any farther south than perpendicular to the Runway 14L extended centerline.*	*Recommendation noted. See response to Comment 12.*

Ref. No.	Comment	Response
	SHEET #11:PHASE 1 CONCEPT PLAN	
30.	**Comment Number 101. The FAA recommends retaining the existing Runway 9R hold-pad in its current location to provide operational flexibility. Retaining the pavement illustrated as removed allows the capability to hold aircraft in this area at times when warranted.**	**The existing 9R hold pad will be retained and shown on the revised Future ALP Set. The lighting and markings of the holding area and Future Taxiway L (parallel and north of the Future Taxiway D west extension) will be coordinated with the FAA during the engineering design phase.**
11/15/04	*Comment Number 101. As depicted on Sheet 3 (Future Airport Layout Plan), the Existing Runway 9R hold-pad needs to be retained in its current location to provide operational flexibility. Ensure consistent depiction of this pavement throughout the ALP.*	*Existing Runway 9R Hold Pad will be unusable due to insufficient aircraft holding capability after Existing Runway 9R is extended and parallel taxiways are constructed.*
31.	**Comment Number 103. The FAA's recommended change should appear on the revised ALP. The Runway 14R mid-field RVR should be shown 4,050 feet from the Runway 14R threshold and 410 feet southwest of the runway centerline.**	**A modification of the Runway 14R mid-field RVR will be coordinated with the OMP/FAA NAVAIDS Working Group and submitted with the revised ALP Set.**
11/15/04	*Comment Number 103. Show the Runway 14R mid-RVR 4,050 feet from the Runway 14R threshold, and 410 feet southwest of runway centerline*	*Recommendation noted. See response to Comment 12.*
32.	**Comment Number 104. The FAA's recommended change should appear on the revised ALP. The Runway 32L glide slope should be moved to gain an acceptable Threshold Crossing Height (TCH). The glide slope antenna mast should be shown 1,050 feet from the threshold for a nominal TCH.**	**Modification of the Runway 32L glide slope will be coordinated with the OMP/FAA NAVAIDS Working Group and the revised location will be depicted on the revised ALP Set.**

Ref. No.	Comment	Response
11/15/04	*Comment Number 104. The Runway 32L GS is shown 1,225 feet from threshold and about 360 feet southwest of runway centerline. This siting will give too high a TCH, and will place the facility within the OFA. Site the facility with the GS antenna mast 1,050 feet from threshold, for a nominal TCH. The desired GS antenna mast lateral distance is 410 feet southwest of runway centerline. If the antenna mast is so placed, the CAT-I GS grading criteria require a small segment of the future detention basin to be filled. Please revise shape of future detention basin to achieve the same surface area. Set Point A 50 feet southwest of the antenna mast. Set Point B 560 feet southwest of the Runway end at runway centerline. Draw a line between Points A and B. The resulting Line AB cuts off a small wedge of basin near the northeast edge of the basin. Northeast of Line AB, the grade must be high enough to be dry at all times. Reconfigure the GS critical area accordingly. Also, reposition the RVR red dot 40 feet northwest of the GS antenna mast.*	*Recommendation noted. See response to Comment 12.*
33.	**Comment Number 105. The FAA's recommended change should appear on the revised ALP. The last three light stations of the Runway 32L Medium-Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) should be deleted from the ALP. The outer-most light bar should be 2,500 feet southeast of the Runway 32L threshold.**	**Modification of the Runway 32L MALSR will be coordinated with the OMP/FAA NAVAIDS Working Group and the revised location will be depicted on the revised ALP Set.**
11/15/04	*Comment Number 105. As shown, the relocated Runway 32L MALSR has three too many light stations. Delete the three southernmost black rectangles of the MALSR. The outermost black rectangle of the MALSR will be the one 2,500 feet southeast of the relocated Runway 32L threshold. Also, the triple bar (thousand-foot bar) is in the wrong place. Make the light bar that is shown at Station 10+55 the triple bar, not the Station 8+45 bar. The MALS threshold light bar would be a 23-light bar, with 220 feet between the outboard lights. Do not depict this threshold bar with the small rectangle that represents the other MALSR stations. The scale of the drawing is so small that it might be best not to show the MALS threshold bar.*	*Recommendation noted. See response to Comment 12.*

Ref. No.	Comment	Response
	GENERAL COMMENTS ON APPROACH SURFACE SHEETS (SHEETS #15 through #44)	**Approach Surface Sheets #15-#44 to be modified and submitted with revised ALP Set.**
34.	**The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	
35.	**Sheet #15 – Existing/Future Runway 22R Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheets #15 to be modified and submitted with revised ALP Set.**
36.	**Sheet #16 – Existing/Future Runway 4R Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheets #16 to be modified and submitted with revised ALP Set.**
37.	**Sheet #17 – Existing/Future Runway 22L Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheets #17 to be modified and submitted with revised ALP Set.**
38.	**Sheet #18 to #19 – Future Runway 9L Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheets #18-#19 to be modified and submitted with revised ALP Set.**

Ref. No.	Comment	Response
39.	**Sheet #20 – Future Runway 27R Approach Surface** **Comment Number 120. Access road to O'Hare Express North. Construction of the access road from Lee Street to the O'Hare Express North buildings is either complete or near completion. Verify that the new streetlights along the west edge of that road do not penetrate the 50:1 approach surface. The streetlight's top elevations and distances from Runway 27R threshold should be evaluated. Lee Street, the O'Hare Express North access road, and the future service road will all cross the Runway 27R extended centerline. The City of Chicago noted this item for assessment prior to revision of the ALP set. Please advise as to the status of this assessment.**	**Approach Surface Sheets #20 to be modified and submitted with revised ALP Set. Heights of new streetlights to be evaluated to determine clearance to obstacle clearance and approach surfaces. Findings will be included in the revised ALP Set.**
11/15/04	Comment Number 120. Point RR2 appears to be depicted in an incorrect location on the plan view. Please revise.	*Noted for revision*
40.	**Sheet #21 – Future Runway 9C Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #21 to be modified and submitted with revised ALP Set.**
41.	**Sheet #22 – Future Runway 27C Approach Surface** **The City of Chicago has indicated they will modify information contained**	**Approach Surface Sheet #22 to be modified and submitted with revised ALP Set.**

Ref. No.	Comment	Response
	on this sheet as requested by FAA.	
42.	**Sheet #23 – Future Runway 9R Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #23 to be modified and submitted with revised ALP Set.**
43.	**Sheet #24 – Future Runway 27L Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #24 to be modified and submitted with revised ALP Set.**
44.	**Sheet #25 – Future Runway 10L Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #25 to be modified and submitted with revised ALP Set.**
45.	**Sheet #26 – Existing Runway 27L/Future Runway 28R Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #26 to be modified and submitted with revised ALP Set.**
46.	**Sheet #28 – Future Runway 28C Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #28 to be modified and submitted with revised ALP Set.**

Ref. No.	Comment	Response
47.	**Sheet #29 to #34 – Future Runway 10R Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheets #29-#34 to be modified and submitted with revised ALP Set.**
48.	**Sheet #35 – Future Runway 28L Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #35 to be modified and submitted with revised ALP Set.**
49.	**Sheet #36 – Existing Runway 9L Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #36 to be modified and submitted with revised ALP Set.**
50.	**Sheet #37 – Existing Runway 27R Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #37 to be modified and submitted with revised ALP Set.**
51.	**Sheet #38 – Existing Runway 9R Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #38 to be modified and submitted with revised ALP Set.**
52.	**Sheet #39 – Existing Runway 14L Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #39 to be modified and submitted with revised ALP Set.**
53.	**Sheet #40 – Existing Runway 32R Approach Surface** **The City of Chicago has indicated they will modify information contained**	**Approach Surface Sheet #40 to be modified and submitted with revised ALP Set.**

Ref. No.	Comment	Response
	on this sheet as requested by FAA.	
54.	**Sheet #42 – Existing Runway 32L Approach Surface** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Approach Surface Sheet #42 to be modified and submitted with revised ALP Set.**
55.	**Sheets #45 to #47 – Future Airport Layout Plan Part 77 Surface Drawings** **Comment Number 161. Part 77 penetrations beyond the first 5,000 feet of the approach surface for Runway 9C and Runway 10R ends must be identified and evaluated. Please identify and provide penetration values.**	**Part 77 Surface Drawings, Sheets #45-#47 to be modified and submitted with revised ALP Set.**
11/15/04	*Comment Number 161. It appears on Sheet #45 that there are Part 77 penetrations beyond the first 5,000 feet of the approach surface by at least one object on both the Runway 9C and 10R ends. It appears these penetrations may be objects B5 and B6 depicted on the "Future Airport Layout Plan Inner Part 77 Surfaces" sheet; if so, they should be identified as such on Sheet #45. If not, the penetrations should be depicted on the Part 77 Surfaces Drawing(s).*	***Noted for revision. Current scale is preferred for presentation purposes. This is consistent with AC 150/5300-13 Appendix 7.***

Ref. No.	Comment	Response
56.	**Sheets #48 to #50 – Existing/Future On-Airport Land Use and Existing Off-Airport Land Use Drawings.** **The City of Chicago has indicated they will modify information contained on this sheet as requested by FAA.**	**Land Use drawings, Sheets #48-#50 to be modified and submitted with revised ALP Set.**
57.	***ITEMS FROM FAA REVIEW OF DECEMBER 2002 AIRPORT LAYOUT PLAN*** **With respect to the comments identified in Appendix D of the July 22, 2004 FAA Comment document, the FAA has determined that the City's response in the November 2004 submittal is acceptable with the exception of the specific comments listed below.**	**Responses listed below.**
58. *11/15/04)*	**Comment Number A-25. At the appropriate time, the FAA will initiate a signage committee to determine the most appropriate markings on the airfield.** *Comment Number A-25. ILS holding position markings (hold line) at GS critical area. It is sometimes necessary to prevent airplanes from entering a GS critical area as they taxi on a parallel taxiway that runs past the GS facility. To define the point at which the airplanes must hold short of the edge of the GS critical area, an ILS hold line is painted across the parallel taxiway. The point at which the ILS hold line is painted across the parallel taxiway is the intersection of the edge of the critical area with the inner edge of the taxiway. The inner edge of the taxiway is the edge closest to the runway that the GS serves. If the new GSs are all 1,050 feet from runway threshold, the ILS holds lines will be between 820' and 850' from threshold. Present guidance on use of the ILS hold lines is as follows:*	**Signage Committee to be initiated by FAA outside of the ALP process.** *Proposed changes to the location of airport markings will be reviewed by FAA.*

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	a. If weather conditions are less/worse than 800-2, airplanes must hold behind the ILS hold line. *b. If weather conditions are 800-2 or better, airplanes may taxi past the ILS hold line.*	
59.	**Comment Numbers A-26, A-27, and A-28. Please update the FAA on the status of the City of Chicago's on-going discussions with the appropriate entities concerning the placement of ALSF-2s of proposed future Runways 9L, 9C, 9R, 10L, 10R, 27L, 27C, 27R and 28R which are depicted to cross public roadways.**	**Design of associated navigational aids continues. This design work is being coordinated and reviewed with the FAA in appropriate forums. No substantive discussions with outside entities, besides FAA, have occurred with respect to the placement of ALSF-2s. Future updates on such discussions will be provided outside of the ALP process. A status of initial findings will be provided to the FAA during the week of May 9.**
11/15/04	*Comment Number A-27. The ALSF-2s of future Runways 9L, 9C, 9R, 10L, 10C, and 10R are all shown crossing railroad tracks. Permits for these crossings will be required from the railroad. To facilitate the issuance of permits for construction within the railroad right of way, it is essential that the DOA begin planning with the railroad now, if that planning is not already in progress.*	*See Response to Comment A-26.*
11/15/04	*Comment Number A-28. Elements of the ALSF-2s of future Runways 9C, 9R, 10L, and 10C are shown west of York Road on land that is shown off airport property. It is the DOA's responsibility to furnish all the interests in real estate required for the establishment of NAVAIDs. For ALSF-2, the interests include land on which to install light bar structures, cable ducts and cables, access roads and walkways, personnel*	*See Response to Comment A-26.*

Ref. No.	Comment	Response
	ingress and egress, security, appurtenances, and avigation easements to protect the approach light planes from penetration. These avigation easements will be for airspace below the 14CFR77, 50:1 approach light plane. For the Runways 9C and 10L ALSF-2s, facility elements will have to be constructed on existing buildings off airport property. If these buildings are to remain, then the DOA must obtain special real estate interests that will be mutually acceptable to the owner of the ALSF-2 and of the buildings, which are to be depicted on the Future On-Airport Land Use Plan.	
60.	**Comment Number A-53. The City of Chicago indicates that controlled access to ARFF access roads will be determined during the engineering design review. The FAA reminds the City of Chicago that 14 CFR Part 139.319 paragraph (k) states that, "Each certificate holder shall ensure that roads which are designated for use as emergency access roads for aircraft rescue and fire fighting vehicles are maintained in a condition that will support those vehicles during all-weather conditions." Access roads which are ARFF only must be designated and evaluated as such.**	**Dedicated ARFF response routes will be planned and maintained in accordance with 14 CFR Part 139.**
11/15/04	*Comment Number A-53. The dedicated ARFF access roads that cross movement areas need to have controlled access. If they are accessible to all traffic, they should be incorporated into the service road system and reviewed as such.*	*Controlled access locations to be determined during the engineering design phase and coordinated with the FAA*
	The travel time for the first responding vehicle to proposed new north runway is too close to the regulation. The FAA, with cooperation from the City's contractor, will develop a field test that closely replicates the proposed distance including turns and driving over the crown of runways. A field test will be conducted in near future.	*ARFF workscope including field tests completed. As part of the certification of the proposed North Runway 9L/27R, the City will demonstrate actual response times required by FAR Part139 upon completion of Future Runway 9L/27R.*
61.	**Comment Numbers A-55 and A-66. The City of Chicago must comply**	**The City of Chicago will comply with all**

Ref. No.	Comment	Response
	with all standards set forth in 14 CFR Part 139 section 337 specifically detailing requirements associated with wildlife hazard management.	**standards associated with wildlife hazard management.**
11/15/04	*Comment Number A-55. The FAA continues to review information provided by the City as it relates to storm water (detention/retention) facilities. Additional information will be provided to the City as the FAA completes the analysis of the data.*	*The City will continue to ensure that USDA Wildlife Services remains engaged in the on-going construction phasing. The Wildlife Hazard Management Plan and program will be updated as necessary.*
11/15/04	*Comment A-66. Prior to commencing any construction related to development in the project, the City of Chicago shall complete a Wildlife Hazard Assessment (WHA) to evaluate each separate phase of the construction plan. USDA Wildlife Services is an acceptable party to conduct this assessment based on their expertise with animal damage control at airports, in addition to their specific expertise at O'Hare. If the WHA is not conducted by USDA Wildlife Services, the FAA will need to be consulted to evaluate the qualifications of the person(s) conducting the assessment prior to approval.*	*See response to Comment A-55.*
62.	**Comment Number A-60. Please see FAA comment Number 5 (original comment Number 7) in the Access Roadway section above.**	**Service roads including access roads to FAA facilities will be added to the ALP and submitted to the FAA as part of the revised ALP Set**
11/15/04	*Comment Number A-60. The study focuses on the primary service road system, which for the most part succeeds in reducing movement area crossings. The FAA requests to see plans for the secondary roads, such as the access roads to the NAVAIDs and visual aids. The FAA would like to emphasize the elimination of the potential need for vehicles to stop on the roadway as it crosses a movement area, e.g., a roadway intersection with a taxiway. Issues associated with these comments will be addressed*	*See response to Comment A-56.*

Ref. No.	Comment	Response
	as identified in the June 9, 2004 letter from the Chicago Area Modernization Program Office to the City of Chicago.	
63. *11/15/04*	**Comment Number A-61. Please see FAA comment Number 25 (original comment Number 78) in the Sheet #3 section above.** *Comment Number A-61. Due to the heavy volume of traffic, both aircraft and service vehicles, the FAA recommends the City tunnel the service road north of Taxiway M between Taxiway ZT and Taxiway ZV through north of Taxiway LL between Taxiway ZZ and Taxiway S.*	**See Response to Reference Number 25.** *New roadways have been tunneled/depressed under aircraft movement areas where practical. The roadways in question have been planned per FAA standard and tunneling has not been determined as a requirement.*
64.	**Comment Number A-62. The FAA continues support of inclusion of the service road bridge in Phase I of the project. Moving the phasing of this project up to an earlier timeframe will assist eliminate unnecessary ground vehicle movements across the taxiway bridges to the north airfield.**	**TAAM modeling results show that runway use configurations for OMP PHASE I show an overall 13.4% increase in use of both Taxiways A and B; however aircraft taxi operations on Taxiway A actually decrease 76.5% compared to Baseline 2002. By the completion of OMP Phase I, TAAM data show either the Taxiway A or B Bridge is used less than two taxi operations per hour for any given runway-use configuration, VFR or IFR. It is expected that service vehicles could continue to use the taxiway bridge as they have previously. Thus, the City continues to believe that the bridge should be constructed in a subsequent phase.**

Ref. No.	Comment	Response
11/15/04	*Comment Number A-62. The FAA continues to support the inclusion of this service road bridge in the earliest phases of the project. This will help eliminate unnecessary ground vehicle movements across the taxiway bridges to the north airfield.*	*Phasing of the Service Road Bridge will ultimately be determined through engineering and benefit/cost analyses however preliminary assessment determined bridge construction slated for Phase 2.*

65.	**Comment Number A-64. Please see FAA comment Number 6 (original comment Number 10) in the Phasing Drawing section above.**	**See Response to Reference Number 6.**
11/15/04	*Comment Number A-64. During Phase 1A, the FAA recommends use of one interim Runway 14L/32R configuration from Runway 9L/27R construction start until Runway 14L/32R decommissioning. During Phase 1B, the FAA is uncertain if the Runway 32L end will be displaced or relocated. Please provide clarity on the phasing of the proposed development.*	*Interim runway configurations will be provided per Phasing Workscope as identified in the June 9, 2004 letter from the FAA OMP Office to the City of Chicago.*

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Ref. No.	*Comment*	*Response*

Ref. No.	*Comment*	*Response*
66.	**Comment Number A-65. Please see FAA comment Number 22 (original comment Numbers 58 and 59) in the Sheet #3 section above.**	**See Response to Reference Number 22.**
67.	**Comment Numbers A-68, A-69, A-70, and A-71. The City of Chicago must incorporate Transportation Security Administration and FAA security requirements during the engineering/design phase.**	**All new or modified facilities and/or operations or construction activity that require security considerations, will be coordinated with the TSA and FAA during the engineering/design phase.**
11/15/04	*Comment Number A-68. All new facilities must have an adequate infrastructure to accommodate an access control system as well as personnel screening facilities since all new construction will either be contained within, or provide access to, the secured area of O'Hare International Airport.*	*TSA and FAA security requirements will be incorporated during engineering design.*
11/15/04	*Comment Number A-69. Terminal and cargo buildings must be designed with sufficient space to handle screening equipment for passengers, employees, baggage and cargo.*	*TSA and FAA security requirements will be incorporated during engineering design.*
11/15/04	*Comment Number A-70. Relocation and modification of perimeter gates must be designed to accommodate an area where screening of vehicles and occupants can take place.*	*TSA and FAA security requirements will be incorporated during engineering design.*
11/15/04	*Comment Number A-71. The increase in the number of employees will necessitate additional capacity in the access control and identification badge computer systems.*	*TSA and FAA security requirements will be incorporated during engineering design.*
68.	**Comment Number B-22) c). Please see FAA comment Number 19 (original comment Number 53) in the Sheet #3 section above.**	**See Response to Reference Number 19.**
11/15/04	*Comment Number B-22) c) If the building just west of York Road remains, one or two ALSF-2 light bars would have to be mounted on the building. This light bar siting would be a structural, access, safety, and leasing challenge that would have to be solved. The FAA and the Sponsor will work together for a solution to this complex configuration.*	*The City continues to have ongoing discussions with the appropriate entities. Information will be provided to the FAA when it becomes available.*

Ref. No.	*Comment*	*Response*
69.	**Comment Number B-30. Please see FAA comment Number 25 (original comment Number 78) in the Sheet #3 section above.**	**See Response to Reference Number 25.**
70.	**Comment Number B-46. Please see FAA comment Number 25 (original comment Number 78) in the Sheet #3 section above.**	**See Response to Reference Number 25.**
11/15/04	*Comment Number B-46. Due to the heavy volume of traffic, both aircraft and service vehicles, Air Traffic recommends the City should tunnel the service road north of Taxiway M between Taxiway ZT and Taxiway ZV through north of Taxiway LL between Taxiway ZZ and Taxiway S. A north/south service road should be maintained at the exit of the east side of the tunnel.*	*New roadways have been tunneled/depressed under aircraft movement areas where practical. The roadways in question have been planned per FAA standard and tunneling has not been determined as a requirement.*

Ref. No.	*Comment*	*Response*
71.	**Comment Number B-49. Please update the FAA on the City of Chicago's status concerning the detailed assessment of the buildings depicted in the proposed Runway 10C and Runway 9C Runway Protection Zones.**	**Detailed assessment is underway but not yet complete. A status of preliminary findings will be provided to the FAA during the week of May 9.**
11/15/04	*Comment Number B-49. The FAA requests that the City of Chicago clarify if any buildings depicted on the base mapping in the Runway 10C RPZ are places of public assembly. Additionally, please confirm if any of the buildings depicted in the Runway 10L or Runway 9C RPZ's are places of public assembly.*	*Preliminary survey indicates that these buildings are not places of public assembly however, a detailed assessment will be provided during discussions with property owners regarding easements for the approach lighting system (ALS). Technical issues pertaining to the ALS will be determined during the engineering/ design phase and communicated to the FAA through the NAVAID Working Group.*
72.	**Comment Number B-75. Although FAA has indicated that Taxiway R south of Runway 4L/22R is not operationally necessary, any attempt to remove this pavement prior to significantly scaled back Runway 22R arrivals could have an operational impact on intra-arrival spacing. The timing of the removal of this taxiway should be identified during the development of the phasing drawings.**	**For planning purposes unless otherwise directed by the FAA, Taxiway R will be shown on the ALP PHASE I drawing and removed from the Future ALP. However the timing for removal of the portion of Taxiway R south of Runway 4L-22R will be coordinated with the FAA.**
11/15/04	*Comment Number B-75. Taxiway R south of Runway 4L/22R is not operationally necessary.*	*This acknowledges that FAA-Air Traffic has determined that Taxiway R south of Runway 4L is not operationally necessary. Taxiway R will be illustrated accordingly in Future ALP drawings.*

Ref. No.	*Comment*	*Response*
73.	**Comment Number B-86. Please see FAA comment Number 22 (original comment Numbers 58 and 59) in the Sheet #3 section above.**	**See Response to Reference Number 22.**
74.	**Comment Number B-87. It is the FAA's understanding that the partial taxiway is planned such that it does not intersect Taxiway E. Please confirm.**	**The partial parallel taxiway shown on the Future ALP northwest of Runway 4L-22R does not intersect with Taxiway E. This parallel taxiway intersects with Taxiway H approximately 100 feet east of Taxiway E**
75.	**Comment Number B-105)a). Please update the FAA on the status of the GS Signal Interference Study.**	**To be coordinated with the OMP/FAA NAVAIDS Working Group.**
11/15/04	*Comment Number B-105) a). The previous recommendation was to route the fence outside of the Runway 28L GS Critical Area. This has been accomplished on the ALP; however, the proposed fence runs parallel to the GS Critical area edge for approximately 150'. This configuration could seriously influence the operation of the proposed GS. The sponsor should have the proposed GS signal modeled to ensure that there will be no impacts as a result of the proposed fence configuration. The FAA has no objections provided the sponsor accepts all responsibility to mitigate any impacts associated with such a configuration.*	*The City has solicited a GS Signal Interference Study. Information will be provided to the FAA through the NAVAIDS Working Group when it becomes available.*
76.	**Comment Number B-105)a)ii). FAA modifies this comment to read "The FAA has no objections provided that semi-flush lights are to be installed only where they fall on runways or taxiways".**	**Comment noted.**

Ref. No.	*Comment*	*Response*
77.	**Comment Number C-57. Please see FAA comment Number 22 (original comment Numbers 58 and 59) in the Sheet #3 section above.**	**See Response to Reference Number 22.**

New FAA Comments

78.	**The Phase 1 Concept Plan shows Runway 14R shortened. If the City plans on Category II/III operations on this runway, the Runway Visual Ranges (RVR's) should be shown.**	**Comment noted.**
79.	**FAA has changed the Precision Object Free Area (POFA) to the Precision Obstacle Free Zone (POFZ). Please modify the POFA on all appropriate ALP sheets to reflect the POFZ.**	**Modified POFA will be depicted on the revised ALP Set.**
80.	**The FAA is in receipt of the City of Chicago's Runway 4R/22L Safety Area Practicability Study. FAA review of that document continues. FAA will provide additional direction in the near future, which will need to be addressed to the satisfaction of the FAA, in the City's future ALP submittal.**	**The FAA is to provide findings of Runway 4R-22L Safety Area Practicability Study to the City.**
81.	**Please submit all anticipated modifications to standards and the justification for each to the FAA for review.**	**Modifications to standards will be submitted under separate cover outside of the ALP process.**